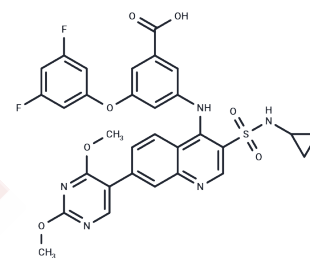


GSK2837808A

## Chemical Properties

CAS No. : 1445879-21-9  
 Formula: C<sub>31</sub>H<sub>25</sub>F<sub>2</sub>N<sub>5</sub>O<sub>7</sub>S  
 Molecular Weight: 649.62  
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
*Actual storage temperature shall be subject to the COA.*



## Biological Description

Description	GSK2837808A is a potent and selective inhibitor of lactate dehydrogenase A (LDHA) with IC <sub>50</sub> values of 1.9 nM for LDHA and 14 nM for LDHB.
Targets(IC <sub>50</sub> )	Dehydrogenase
In vitro	GSK2837808A inhibits lactate production in hypoxia but at higher concentrations than in normoxia (EC <sub>50</sub> =10 μM). It also reduces ECAR (EC <sub>50</sub> =10 μM). LDH inhibition by GSK2837808A alters multiple metabolic pathways in Snu398 cells. GSK2837808A rapidly and profoundly inhibits lactate production rates in multiple cancer cell lines including hepatocellular and breast carcinomas. GSK2837808A potency does not correlate with LDHA, LDHB, or the total LDH expression levels. The potency of GSK2837808A across 30 cancer cell lines with different LDHA and LDHB expression levels range from 400 nM to no effect (EC <sub>50</sub> reported as 30 μM).
In vivo	GSK2837808A (p.o.; 50 mg/kg in rats; 100 mg/kg in mice) treatment, causes blood compound levels at or below the detection limit of 2.5 ng/mL. Clearance following IV infusion of GSK2837808A at 0.25 mg/kg is displayed to be 69 mL/minute/kg in rats and it exceeds the animal liver blood flow.

## Solubility Information

Solubility	DMSO: 102 mg/mL (157.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (6.16 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.5394 mL	7.6968 mL	15.3936 mL
5 mM	0.3079 mL	1.5394 mL	3.0787 mL
10 mM	0.1539 mL	0.7697 mL	1.5394 mL
50 mM	0.0308 mL	0.1539 mL	0.3079 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Billiard J, et al. Quinoline 3-sulfonamides inhibit lactate dehydrogenase A and reverse aerobic glycolysis in cancer cells. *Cancer Metab.* 2013 Sep 6;1(1):19.

Chen C, Zhang X, Wang Y, et al. Translational and Post-translational Control of Human Naïve versus Primed Pluripotency. *iScience.* 2021: 103645.

Zhang Y T, Xing M L, Fang H H, et al. Effects of lactate on metabolism and differentiation of CD4+T cells. *Molecular Immunology.* 2023, 154: 96-107.

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